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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/909,025	07/19/2001	Neil F. Schutzman	EMC-011PUS	9106

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DALY, CROWLEY & MOFFORD, LLP  
SUITE 101  
275 TURNPIKE STREET  
CANTON, MA 02021-2310

EXAMINER

CHEN, CHONGSHAN

ART UNIT	PAPER NUMBER
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2172

DATE MAILED: 09/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

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**Office Action Summary**

Application No.

09/909,025

Applicant(s)

SCHUTZMAN ET AL.

Examiner

Chongshan Chen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-46 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-46 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 10, 15, 18-21, 25-26, 28-30 and 40-41 are rejected under 35 U.S.C. 102(b) as being anticipated by Allen (5,491,810).

As per claim 1, Allen teaches a method comprising:

receiving a list a properties associated with storage (Allen, Fig. 4A & 4B, col. 3, lines 13-52);

choosing one or more of said properties to build an expression (Allen, col. 3, lines 13-52);

evaluating said expression to determine a pool of storage (Allen, col. 6, lines 10-60); and  
selecting a piece of storage having characteristics defined by the storage properties in the expression (Allen, col. 3, lines 13-52).

As per claim 10, Allen teaches all the claimed subject matters as discussed in claim 1, and further teaches validating the storage for operation (Allen, col. 6, lines 10-60).

As per claim 15, Allen teaches all the claimed subject matters as discussed in claim 1, and further teaches assigning one or more storage properties to one or more pieces of storage; and associating at least one storage property with at least one piece of storage (Allen, col. 3, lines 13-52).

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As per claim 18, Allen teaches all the claimed subject matters as discussed in claim 1, and further teaches generating one or more storage properties (Allen, col. 3, lines 13-52).

As per claim 19, Allen teaches all the claimed subject matters as discussed in claim 1, and further teaches identifying one or more properties to associate with a plurality of specific storage devices (Allen, col. 3, lines 13-52).

As per claim 20, Allen teaches all the claimed subject matters as discussed in claim 1, and further teaches the storage is not physical storage (Allen, Fig. 3).

As per claim 21, Allen teaches all the claimed subject matters as discussed in claim 18, and further teaches generating user-defined storage properties (Allen, col. 3, lines 13-52).

As per claim 25, Allen teaches a method of generating a storage pool comprising:  
assigning one or more storage properties to one or more pieces of storage (Allen, col. 3, lines 13-52); and

associating at least one storage property with at least one piece of storage (Allen, col. 3, lines 13-52).

As per claim 26, Allen teaches all the claimed subject matters as discussed in claim 25, and further teaches generating one or more storage properties (Allen, col. 3, lines 13-52).

Claims 28-30 are rejected on grounds corresponding to the reasons given above for claims 19-21.

As per claim 40, Allen teaches a method comprising:  
evaluating an expression to determine a pool storage (Allen, col. 6, lines 10-60); and  
selecting a piece of storage having characteristics defined by storage properties in the expression (Allen, col. 6, lines 10-60).

Claim 41 is rejected on grounds corresponding to the reasons given above for claim 10.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2-9, 11-14, 16-17, 22-24, 27, 31-39 and 42-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Allen (5,491,810).

As per claim 2, Allen teaches all the claimed subject matters as discussed in claim 1, except for explicitly disclosing receiving is done by a database administrator (DBA). However, Allen teaches a method of allocating storage space to user. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide Allen's method to a database administrator (DBA) in order to allow the DBA to select a best fit storage space.

As per claim 3, Allen teaches all the claimed subject matters as discussed in claim 1, except for explicitly disclosing choosing is done by a database administrator (DBA). However, Allen teaches a method of allocating storage space to user. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide Allen's method to a database administrator (DBA) in order to allow the DBA to select a best fit storage space.

As per claim 4, Allen teaches all the claimed subject matters as discussed in claim 1, except for explicitly disclosing choosing a logical operator to include in the expression.

However, the user must choose a logical operator in order to combine one or more user desired storage properties to find a best fit storage space. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to choose a logical operator in order to combine one or more user desired storage properties to find a best-fit storage space.

As per claim 5, Allen teaches all the claimed subject matters as discussed in claim 2, and further teaches determining if all the properties received by the database administrator are all of the properties wanted by the database administrator (Allen, col. 6, lines 10-60).

As per claim 6, Allen teaches all the claimed subject matters as discussed in claim 5, and further teaches in response to all the properties received by the database administrator not being all of the properties desired by the database administrator, adding a property desired by the database administrator (Allen, col. 6, lines 10-60).

As per claim 7, Allen teaches all the claimed subject matters as discussed in claim 6, and further teaches selecting at least one new property to build the expression (Allen, col. 6, lines 10-60).

As per claim 8, Allen teaches all the claimed subject matters as discussed in claim 1, except for explicitly disclosing step of evaluating is done by a storage administrator (SA). However, Allen teaches a method to evaluate requirements for a storage request and allocate storage space. There must be a storage administrator (SA) in Allen's invention in order to evaluate requirements for a storage request and find a best-fit storage space for user. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made

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to have a storage administrator in order to evaluate requirements for a storage request and find a best fit storage space for user.

As per claim 9, Allen teaches all the claimed subject matters as discussed in claim 1, except for explicitly disclosing selecting is done by a storage administrator (SA). However, Allen teaches a method to evaluate requirements for a storage request and allocate storage space. There must be a storage administrator (SA) in Allen's invention in order to evaluate requirements for a storage request and find a best-fit storage space for user. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have a storage administrator in order to evaluate requirements for a storage request and find a best fit storage space for user.

As per claim 11, Allen teaches all the claimed subject matters as discussed in claim 10, except for explicitly disclosing indicating that when there is not enough storage for an operation providing an indication that the operation can not be carried out. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to indicate when there is not enough storage for an operation in order to provide user information about the status of the operation.

As per claim 12, Allen teaches all the claimed subject matters as discussed in claim 10, except for explicitly disclosing in response to the validating indicating that there is enough storage for operation, then completing the operation. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to indicate that there is enough storage for operation so that the storage space can be selected and allocated for the operation.

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As per claim 13, Allen teaches all the claimed subject matters as discussed in claim 10, except for explicitly disclosing in response to the validating indicating that there is not enough storage to complete the operation, then performing the operation with the storage which is available. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to perform the operation with the storage which is available in order to perform the operation.

As per claim 14, Allen teaches all the claimed subject matters as discussed in claim 10, except for explicitly disclosing in the response to the validating indicating that there is not enough storage to complete the operation then searching for more storage. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to search for more storage if there is not enough storage to complete the operation in order to perform the operation.

As per claim 16, Allen teaches all the claimed subject matters as discussed in claim 15, except for explicitly disclosing said assigning is done by a storage administrator (SA). However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have said job done by a storage administrator (SA) because SA manager storage space.

As per claim 17, Allen teaches all the claimed subject matters as discussed in claim 15, except for explicitly disclosing said associating is done by a storage administrator (SA). However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have said job done by a storage administrator (SA) because SA manager storage space.



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As per claim 22, Allen teaches all the claimed subject matters as discussed in claim 16, and further teaches determining if any of the system is identified as hands-off storage (Allen, col. 3, lines 13-52).

As per claim 23, Allen teaches all the claimed subject matters as discussed in claim 16, and further teaches determining if any of the storage is identified as can-use storage (Allen, col. 3, lines 13-52).

As per claim 24, Allen teaches all the claimed subject matters as discussed in claim 1, except for explicitly disclosing said steps of receiving, choosing, evaluating and selecting are performed as part of an information recovery operation. However, Allen teaches requesting and allocating storage space, the usage of the allocated storage space is just a design choice. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use Allen's method as part of an information recovery operation in order to select storage space.

Claim 27 is rejected on grounds corresponding to the reasons given above for claim 16.

Claims 31-33 are rejected on grounds corresponding to the reasons given above for claims 22-24.

As per claim 34, Allen teaches a method comprising the steps of:

receiving a list a properties (Allen, col. 3, lines 13-52); and

selecting one or more properties to build an expression (Allen, col. 3, lines 13-52).

Allen does not explicitly disclose receiving is done by a database administrator (DBA). However, Allen teaches a method of allocating storage space to user. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide

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Allen's method to a database administrator (DBA) in order to allow the DBA to select a best fit storage space.

Claims 35-38 are rejected on grounds corresponding to the reasons given above for claims 4-7.

Claim 39 is rejected on grounds corresponding to the reasons given above for claim 24.

Claims 42-45 are rejected on grounds corresponding to the reasons given above for claims 11-14.

Claim 46 is rejected on grounds corresponding to the reasons given above for claim 24.

### ***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Fairman et al. (6,453,376) disclose method for implementing scheduling mechanisms with selectable resource modes.

Gelb et al. (5,018,060) disclose allocating data storage space of peripheral data storage devices using implied allocation based on user parameters.

Borcherding et al. (5,303,369) disclose scheduling system for multiprocessor operating system.

Combs et al. (6,523,065) disclose method and system for maintenance of global network information in a distributed network-based resource allocation system.

Wallis (5,740,371) discloses load balancing of connections to parallel servers.

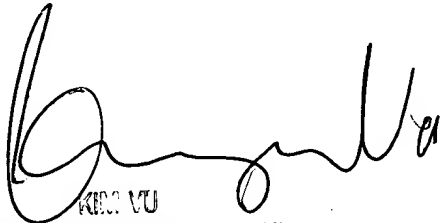
***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chongshan Chen whose telephone number is (703) 305-8319. The examiner can normally be reached on Monday - Friday (8:00 am - 4:30 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Y Vu can be reached on (703)305-4393. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-3900.

CC

  
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